In the Specification

Paragraph at page 46, lines 4 through 11:

Conventional Substituted Aniline EO Chromophores

Wherein D = donor = $—NH_2$, $—N(CH_3)_2$, $—N(CH_2CH_3)_2$, or $–N(Y)_2$ where Y = alkyl alcohols, alkyl (hydrocarbon or fluorocarbon) esters, or alkyl silane derivatives;

A = acceptor = $—NO_2$, or $—C(CN)C(CN)_2$, and

wherein X_1, X_2, X_3, X_4 are each -H.

Paragraph at page 46, lines 15 through 25:

Wherein D = donor = $—NH_2$, $—N(CH_3)_2$, $—N(CH_2CH_3)_2$, or $–N(Y)_2$ where Y = alkyl alcohols, alkyl (hydrocarbon or fluorocarbon) esters, or alkyl silane derivatives;

A = acceptor = $—NO_2$, $—C(CN)C(CN)_2$, or $—N=C(R_1)(R_2)$ [[—N=C(R1)(R2)]], wherein R_1= CF_3, C_2F_5, C_nF_{2n+1}, R_2= H, CH_3, CF_3, C_2F_5
wherein when A = = $—NO_2$, or $—C(CN)C(CN)_2$, then X_1, X_2, X_3, X_4 are each independently selected from the group -F and -H, and at least one -F is selected, and when A = $—N=C(R_1)(R_2)$ [[—N=C(R1)(R2)]], wherein R_1= CF_3, C_2F_5, C_nF_{2n+1}, R_2= H, CH_3, CF_3, C_2F_5, then X_1, X_2, X_3, X_4 are each independently selected from the group -F and -H.

Paragraph at page 47, lines 5 through 25:

Wherein D = donor = $—NH_2$, $—N(CH_3)_2$, $—N(CH_2CH_3)_2$, or – $N(Y)_2$ where Y = alkyl alcohols, alkyl (hydrocarbon or fluorocarbon) esters, or alkyl silane derivatives;

primary acceptor = —NO_2, —C(CN)C(CN)$_2$, or —N=C(R_1)(R_2) [[—N=C (R1)(R2)]], where R_1= CF_3, C_2F_5, C_nF_{2n+1}, R_2 = H, CH_3, CF_3, C_2F_5

secondary acceptor = —CN, or —CF_3

wherein when [[if]] A_1 and A_2 are both primary acceptors selected from —NO_2, or —C(CN)C(CN)$_2$, then X_1, X_2, X_3 are each independently selected from -F and -H, but at least one -F must be selected;
wherein when [[if]] A_1 and A_2 are both secondary acceptors selected from —NO_2, or —C(CN)C(CN)$_2$, then X_1, X_2, X_3 are each independently selected from -F and -H, but at least one -F must be selected;
wherein when [[if]] A_1 and/or A_2 are selected from the primary acceptor —N=C(R_1)(R_2) [[—N=C (R1)(R2)]], where R_1= CF_3, C_2F_5, C_nF_{2n+1}, R_2 = H, CH_3, CF_3, C_2F_5, then X_1, X_2, X_3 are each independently selected from -F and -H; and
wherein when [[if]] A_1 is selected from any primary acceptor, and A_2 is selected from any secondary acceptor, then X_1, X_2, X_3 are each independently selected from -F and -H.

Paragraph at page 48, lines 6 through 14:

Conventional Substituted Azobenzene EO Chromophores
Wherein D = donor = —NH_2, —$N(CH_3)_2$, —$N(CH_2CH_3)_2$, or –$N(Y)_2$ where Y = alkyl alcohols, alkyl (hydrocarbon or fluorocarbon) esters, or alkyl silane derivatives;

A = acceptor = —NO_2, or —C(CN)C(CN)$_2$, and

wherein X_1, X_2, X_3, X_4 are each -H.

Paragraph at page 48, line 16 through page 49, line 2:

Wherein D = donor = $—NH_2$, $—N(CH_3)_2$, $—N(CH_2CH_3)_2$, or $–N(Y)_2$ where Y = alkyl alcohols, alkyl (hydrocarbon or fluorocarbon) esters, or alkyl silane derivatives;

A = acceptor = $—NO_2$, $—C(CN)C(CN)_2$, or $—N=C(R_1)(R_2)$ [[—N=C(R1)(R2)]], wherein R_1= CF_3, C_2F_5, C_nF_{2n+1}, R_2= H, CH_3, CF_3, C_2F_5
wherein when A = = $—NO_2$, or $—C(CN)C(CN)_2$, then X_1, X_2, X_3, X_4 are each independently selected from the group -F and -H, and at least one -F is selected, and when A = $—N=C(R_1)(R_2)$ [[—N=C(R1)(R2)]], wherein R_1= CF_3, C_2F_5, C_nF_{2n+1}, R_2= H, CH_3, CF_3, C_2F_5, then X_1, X_2, X_3, X_4 are each independently selected from the group -F and -H.

Paragraph at page 49, lines 9 through 29:

Wherein D = donor = $—NH_2$, $—N(CH_3)_2$, $—N(CH_2CH_3)_2$, or – $N(Y)_2$ where Y = alkyl alcohols, alkyl (hydrocarbon or fluorocarbon) esters, or alkyl silane derivatives;

primary acceptor = $—NO_2$, $—C(CN)C(CN)_2$, or $—N=C(R_1)(R_2)$ [[—N=C (R1)(R2)]], where R_1= CF_3, C_2F_5, C_nF_{2n+1}, R_2 = H, CH_3, CF_3, C_2F_5

secondary acceptor = —CN, or $—CF_3$

wherein when [[if]] A_1 and A_2 are both primary acceptors selected from $—NO_2$, or $—C(CN)C(CN)_2$, then X_1, X_2, X_3 are each independently selected from -F and -H, but at least one -F must be selected;
wherein when [[if]] A_1 and A_2 are both secondary acceptors selected from $—NO_2$, or $—C(CN)C(CN)_2$, then X_1, X_2, X_3 are each independently selected from -F and -H, but at least one -F must be selected;
wherein when [[if]] A_1 and/or A_2 are selected from the primary acceptor $—N=C(R_1)(R_2)$ [[—N=C (R1)(R2)]], where R_1= CF_3, C_2F_5, C_nF_{2n+1}, R_2 = H, CH_3, CF_3, C_2F_5, then X_1, X_2, X_3 are each independently selected from -F and -H; and

wherein when [[if]] A_1 is selected from any primary acceptor, and A_2 is selected from any secondary acceptor, then X_1, X_2, X_3 are each independently selected from -F and -H.

Paragraph at page 50, lines 5 through 12:

Conventional Substituted Stilbene EO Chromophores
Wherein D = donor = $—NH_2$, $—N(CH_3)_2$, $—N(CH_2CH_3)_2$, or $–N(Y)_2$ where Y = alkyl alcohols, alkyl (hydrocarbon or fluorocarbon) esters, or alkyl silane derivatives;

A = acceptor = $—NO_2$, or $—C(CN)C(CN)_2$, and

wherein X_1, X_2, X_3, X_4 are each -H.

Paragraph at page 50, lines 16 through 26:

Wherein D = donor = $—NH_2$, $—N(CH_3)_2$, $—N(CH_2CH_3)_2$, or $–N(Y)_2$ where Y = alkyl alcohols, alkyl (hydrocarbon or fluorocarbon) esters, or alkyl silane derivatives;

A = acceptor = $—NO_2$, $—C(CN)C(CN)_2$, or $—N=C(R_1)(R_2)$ [[—N=C(R1)(R2)]], wherein R_1= CF_3, C_2F_5, C_nF_{2n+1}, R_2= H, CH_3, CF_3, C_2F_5
wherein when A = = $—NO_2$, or $—C(CN)C(CN)_2$, then X_1, X_2, X_3, X_4 are each independently selected from the group -F and -H, and at least one -F is selected, and when A = $—N=C(R_1)(R_2)$ [[—N=C(R1)(R2)]], wherein R_1= CF_3, C_2F_5, C_nF_{2n+1}, R_2= H, CH_3, CF_3, C_2F_5, then X_1, X_2, X_3, X_4 are each independently selected from the group -F and -H.

Paragraph at page 51, line 6 through line 26:

Wherein D = donor = $—NH_2$, $—N(CH_3)_2$, $—N(CH_2CH_3)_2$, or $– N(Y)_2$ where Y = alkyl alcohols, alkyl (hydrocarbon or fluorocarbon) esters, or alkyl silane derivatives;

primary acceptor = $—NO_2$, $—C(CN)C(CN)_2$, or $—N=C(R_1)(R_2)$ [[—N=C (R1)(R2)]], where R_1= CF_3, C_2F_5, C_nF_{2n+1}, R_2 = H, CH_3, CF_3, C_2F_5

secondary acceptor = —CN, or $—CF_3$

wherein when [[if]] A_1 and A_2 are both primary acceptors selected from $—NO_2$, or $—C(CN)C(CN)_2$, then X_1, X_2, X_3 are each independently selected from -F and -H, but at least one -F must be selected;
wherein when [[if]] A_1 and A_2 are both secondary acceptors selected from $—NO_2$, or $—C(CN)C(CN)_2$, then X_1, X_2, X_3 are each independently selected from -F and -H, but at least one -F must be selected;
wherein when [[if]] A_1 and/or A_2 are selected from the primary acceptor $—N=C(R_1)(R_2)$ [[—N=C (R1)(R2)]], where R_1= CF_3, C_2F_5, C_nF_{2n+1}, R_2 = H, CH_3, CF_3, C_2F_5, then X_1, X_2, X_3 are each independently selected from -F and -H; and
wherein when [[if]] A_1 is selected from any primary acceptor, and A_2 is selected from any secondary acceptor, then X_1, X_2, X_3 are each independently selected from -F and -H.

Paragraph at page 52, lines 4 through 11:

Conventional Substituted Imine EO Chromophores
Wherein D = donor = $—NH_2$, $—N(CH_3)_2$, $—N(CH_2CH_3)_2$, or $–N(Y)_2$ where Y = alkyl alcohols, alkyl (hydrocarbon or fluorocarbon) esters, or alkyl silane derivatives;

A = acceptor = $—NO_2$, or $—C(CN)C(CN)_2$, and

wherein X_1, X_2, X_3, X_4 are each -H.

Paragraph at page 53, lines 1 through 11:

Wherein D = donor = $-NH_2$, $-N(CH_3)_2$, $-N(CH_2CH_3)_2$, or $-N(Y)_2$ where Y = alkyl alcohols, alkyl (hydrocarbon or fluorocarbon) esters, or alkyl silane derivatives;

A = acceptor = $-NO_2$, $-C(CN)C(CN)_2$, or $-N=C(R_1)(R_2)$ [[—N=C(R1)(R2)]], wherein R_1= CF_3, C_2F_5, C_nF_{2n+1}, R_2= H, CH_3, CF_3, C_2F_5
wherein when A = = $-NO_2$, or $-C(CN)C(CN)_2$, then X_1, X_2, X_3, X_4 are each independently selected from the group -F and -H, and at least one -F is selected, and when A = $-N=C(R_1)(R_2)$ [[—N=C(R1)(R2)]], wherein R_1= CF_3, C_2F_5, C_nF_{2n+1}, R_2= H, CH_3, CF_3, C_2F_5, then X_1, X_2, X_3, X_4 are each independently selected from the group -F and -H.

Paragraph at page 53, line 19 through page 54, line 15:

Wherein D = donor = $-NH_2$, $-N(CH_3)_2$, $-N(CH_2CH_3)_2$, or $-N(Y)_2$ where Y = alkyl alcohols, alkyl (hydrocarbon or fluorocarbon) esters, or alkyl silane derivatives;

primary acceptor = $-NO_2$, $-C(CN)C(CN)_2$, or $-N=C(R_1)(R_2)$ [[—N=C (R1)(R2)]], where R_1= CF_3, C_2F_5, C_nF_{2n+1}, R_2 = H, CH_3, CF_3, C_2F_5

secondary acceptor = —CN, or $-CF_3$

wherein when [[if]] A_1 and A_2 are both primary acceptors selected from $-NO_2$, or $-C(CN)C(CN)_2$, then X_1, X_2, X_3 are each independently selected from -F and -H, but at least one -F must be selected;
wherein when [[if]] A_1 and A_2 are both secondary acceptors selected from $-NO_2$, or $-C(CN)C(CN)_2$, then X_1, X_2, X_3 are each independently selected from -F and -H, but at

least one -F must be selected;

wherein when [[if]] A_1 and/or A_2 are selected from the primary acceptor —N=C(R_1)(R_2) [[—N=C (R1)(R2)]], where R_1= CF_3, C_2F_5, C_nF_{2n+1}, R_2 = H, CH_3, CF_3, C_2F_5, then X_1, X_2, X_3 are each independently selected from -F and -H; and

wherein when [[if]] A_1 is selected from any primary acceptor, and A_2 is selected from any secondary acceptor, then X_1, X_2, X_3 are each independently selected from -F and -H.

Paragraph at page 56, lines 1-3:

Primary = —NO_2, —C(CN)C(CN)$_2$, —N=C(R_1)(R_2) [[—N=C (R1)(R2)]], where R_1= CF_3, C_2F_5, C_nF_{2n+1}, R_2 = H, CH_3, CF_3, C_2F_5

Secondary = —CN, —CF_3

Paragraph at page 57, lines 7-11:

S = spacer = —CH=CH—, —N=CH—, —CH=N—, —N=N—

(stilbene) (imine) (imine) (azo)

Primary = —NO_2, —C(CN)C(CN)$_2$, —N=C(R_1)(R_2) [[—N=C (R1)(R2)]], where R_1= CF_3, C_2F_5, C_nF_{2n+1}, R_2 = H, CH_3, CF_3, C_2F_5

Secondary = —CN, —CF_3

Paragraph at page 59, lines 2 through 6:

S = spacer = —CH=CH—, —N=CH—, —CH=N—, —N=N—

(stilbene) (imine) (imine) (azo)

Primary = —NO_2, —C(CN)C(CN)$_2$, —N=C(R_1)(R_2) [[—N=C (R1)(R2)]], where R_1= CF_3, C_2F_5, C_nF_{2n+1}, R_2 = H, CH_3, CF_3, C_2F_5

Secondary = —CN, —CF_3

Paragraph at page 79, lines 1-11:

Referring again to the Drawing, the modified fiber 100 was placed in a test apparatus 150, in order to measure the thermooptical properties of the functional optical material 105 of this invention. Test apparatus 150 consisted of a heating block 152 that held the modified fiber 100. The heating block was made up of an electrical heating coil (not shown) and connected to a source of electrical power 154. A thermocouple 160 was mounted to the functional optical material 105 to allow temperature measurements. The thermocouple 160 was connected to a display unit 162 for amplification of the signal and display. A light source 170 was used to send a light 172 into one end of the modified fiber 100 and a light detector 174 for detected light 176 that had passed through the modified fiber 100.